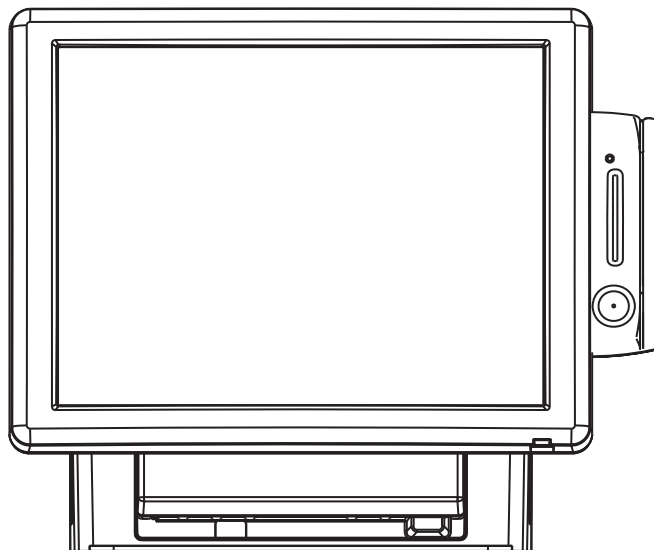


USER MANUAL

VERSION V1.4 December 2010

Point-of-Sale Hardware System



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Safety

IMPORTANT SAFETY INSTRUCTIONS

1. To disconnect the machine from the electrical power supply, turn off the power switch and remove the power cord plug from the wall socket. The wall socket must be easily accessible and in close proximity to the machine.
2. Read these instructions carefully. Save these instructions for future reference.
3. Follow all warnings and instructions marked on the product.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.



This device complies with the requirements of the EEC directive 2004/108/EC with regard to “Electromagnetic compatibility” and 2006/95/EC “Low Voltage Directive”.



This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

CAUTION ON LITHIUM BATTERIES

There is a danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.



Battery Caution

Risk of explosion if battery is replaced by an incorrectly type.
Dispose of used battery according to the local disposal instructions.



Safety Caution

Note: To comply with IEC60950-1 Clause 2.5 (limited power sources, L.P.S) related legislation, peripherals shall be 4.7.3.2 “Materials for fire enclosure” compliant

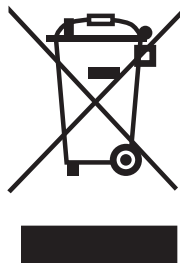
4.7.3.2 Materials for fire enclosures

For MOVABLE EQUIPMENT having a total mass not exceeding 18kg.the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.

For MOVABLE EQUIPMENT having a total mass exceeding 18kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1

LEGISLATION AND WEEE SYMBOL

2002/96/EC Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.



The crossed dust bin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.

Revision History

Changes to the original user manual are listed below:

Revision	Description	Date
1.0	• Initial release	2009 March
1.1	• B68 motherboard added	2010 March
1.2	• C48 motherboard added • Optional Accessories updated • Specification updated	2010 July
1.3	• B68 & B78 Jumper Setting update	2010 August
1.4	• C48 update to V2.1	2010 December

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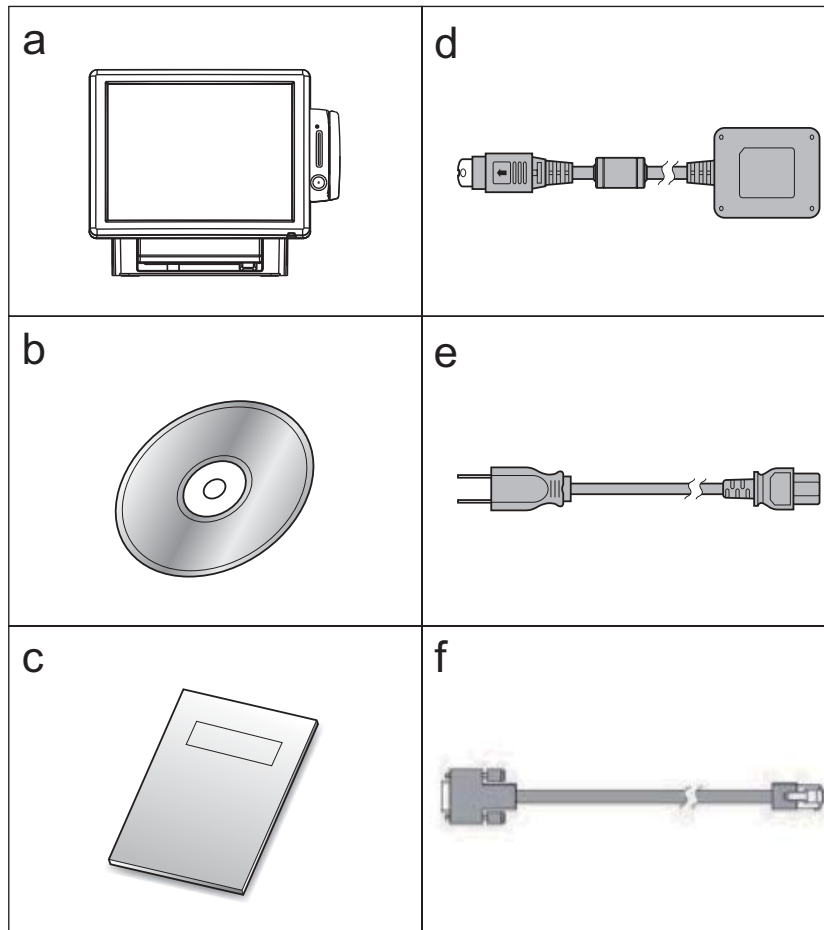
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1. Packing List

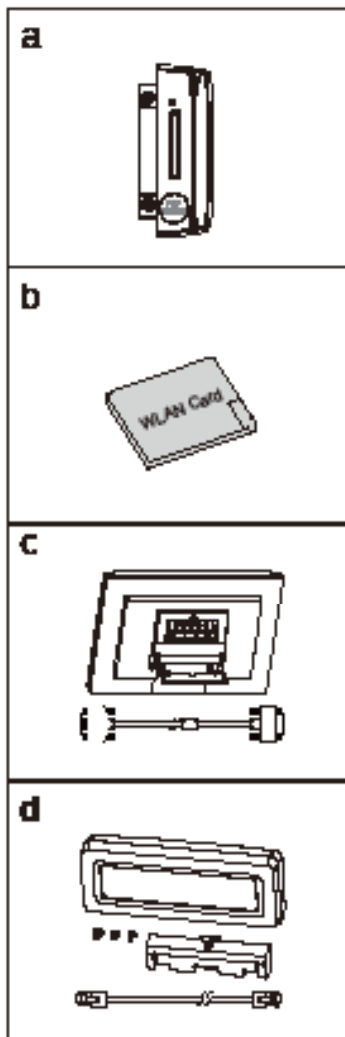
1-1. Standard Accessories



- a. System (with stand)
- b. Driver disk
- c. User guide
- d. Power adapter
- e. Power cord
- f. RJ45-DB9 cable (x2)

Note: Power cord will be supplied differently according to various region or country.

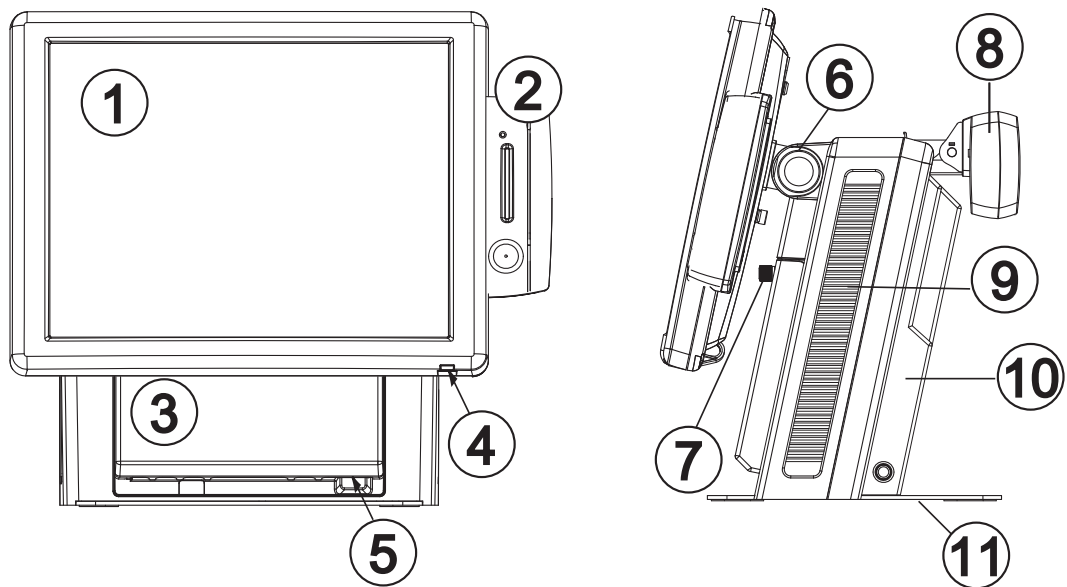
1-2. Optional Accessories



- a. 3-in-1 MSR module
- b. Mini PCI or mini PCI-E WLAN Card (with internal antenna cable)
- c. Second display module (with VGA cable)
- d. VFD module (with RJ-45 cable)

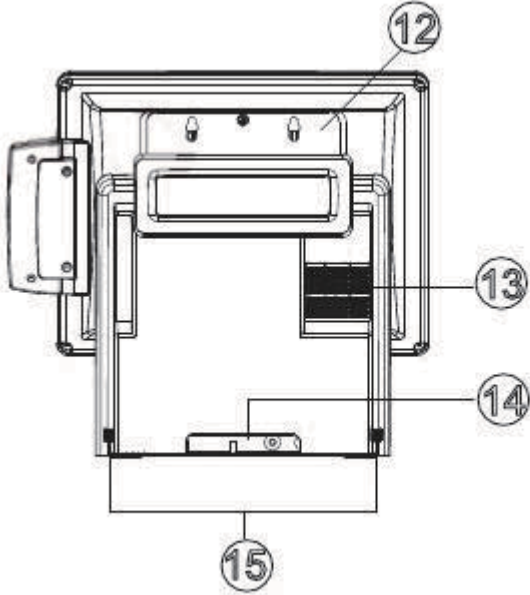
2. System View

2-1. Front & Side View



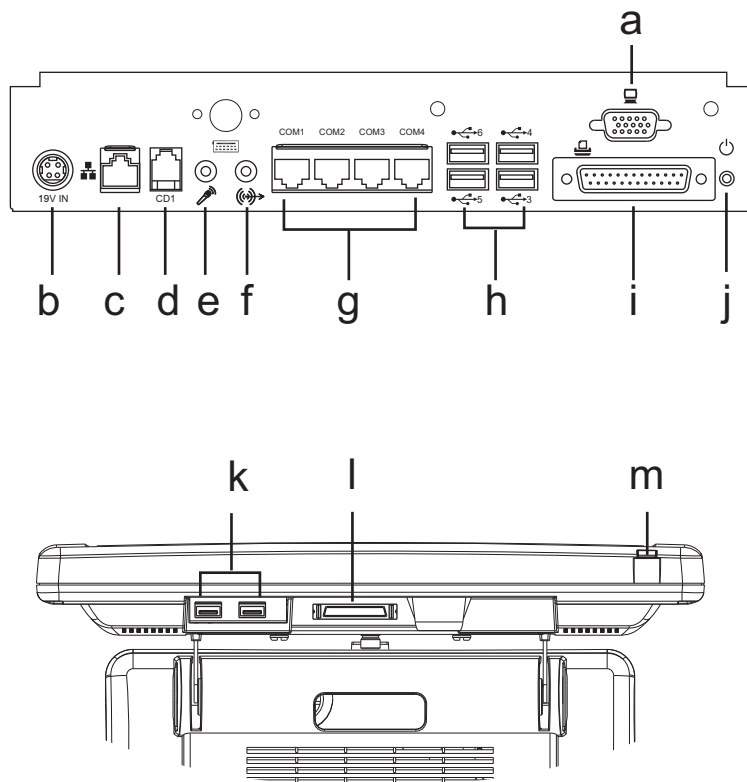
Item No.	Description
1	Touch screen
2	MSR module (<i>optional</i>)
3	HDD installation cover
4	Power LED
5	Power Button
6	Hinge for TFT-LCD
7	Thumb screw for HDD cover
8	VFD
9	Ventilation
10	Rear cover for motherboard metal cover
11	Rugged footprint

2-2. Rear View with stand



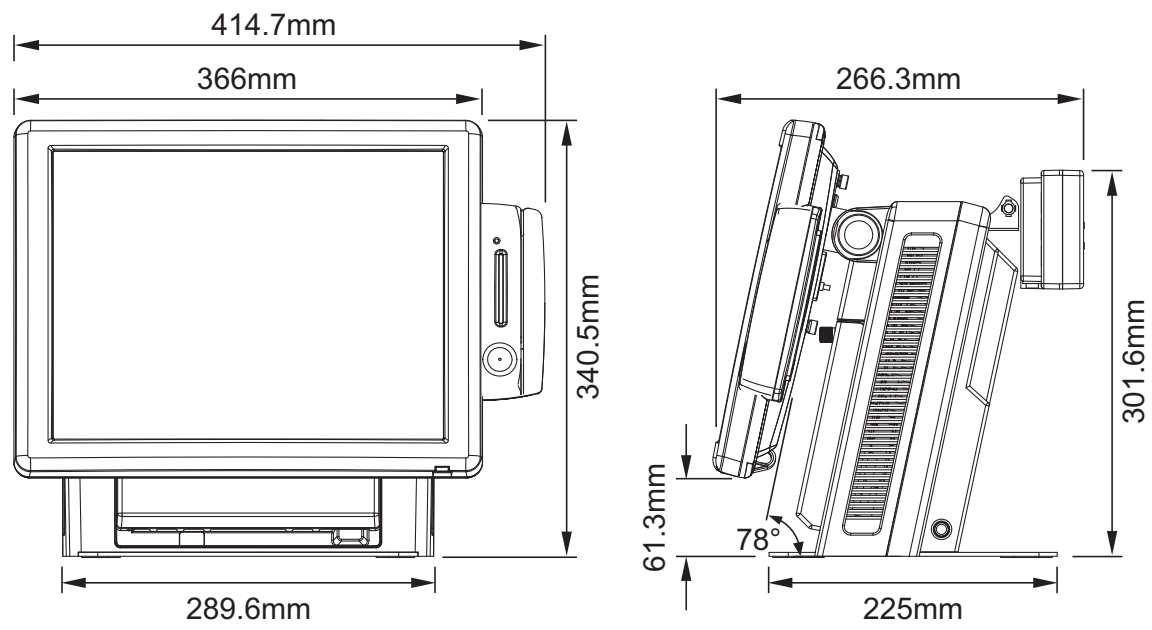
Item No.	Description
12	VESA mount installation plate
13	System Fan
14	Power adapter cable outlet
15	Thumb screws of rear cover

2-3. I/O Ports View



Item No.	Description
a	2nd VGA
b	DC-In
c	LAN
d	Cash Drawer (12V/24V)
e	MIC-in
f	Line-out
g	COM 1, 2, 3, 4 (from left to right)
h	USB x 4
i	Parallel
j	Power Switch
k	USB x 2
l	LCD Connector
m	Power LED

2-4. System Dimension

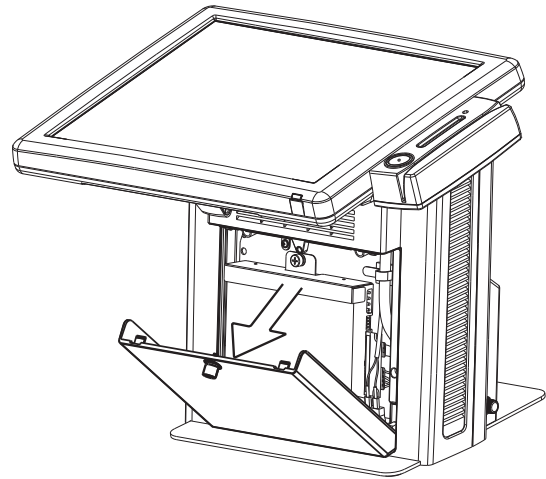


3. System Assembly

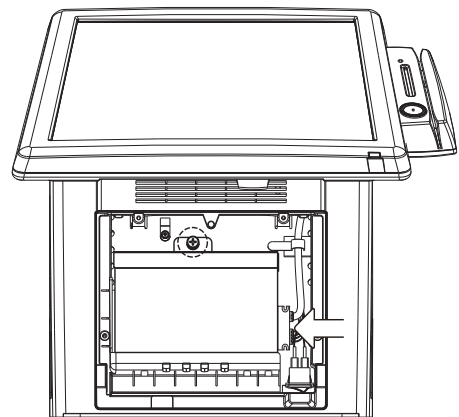
To remove and replace the HDD, please follow below steps. The procedures may be slightly different depending on 3.5" or 2.5 HDD you will install.

3-1. HDD replacement for fan system

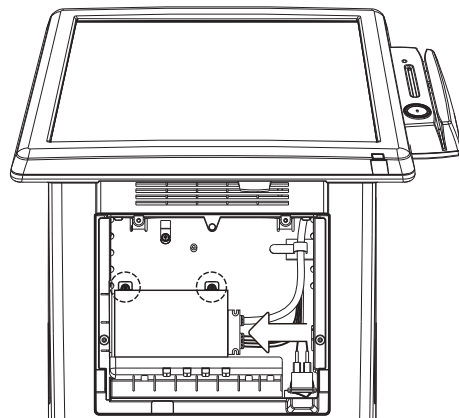
1. Loose the thumb screw on the HDD cover.
2. Open the HDD cover.
3. Install the 3.5" HDD and fasten the screw (x1) with the bracket to fix the 3.5" HDD.
4. Connect the SATA cable and cover the HDD cover.
5. If your system is installed with 2.5" HDD, please fasten the screws (x2) and connect the SATA cable and cover the HDD cover.



For 3.5" HDD



For 2.5" HDD

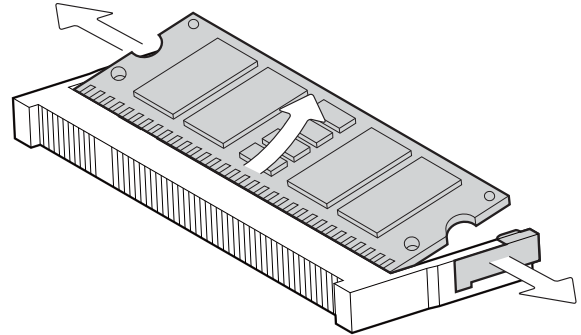


3-2. RAM Replacement

Please open the rear cover (see Chapter 4-4 step 1&2) first then remove and replace the RAM module. You can refer to the motherboard layout to find the memory compartment. (See chapter 6-1-1, 6-2-1, 6-3-1, 6-4-1 for different motherboard)

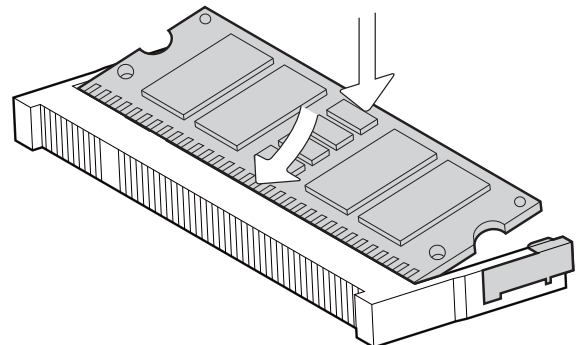
Removing a RAM module

1. Use both fingers to pull the ejector clips out of the sides of the module.
2. Slide out to take out the memory module from the memory slot.



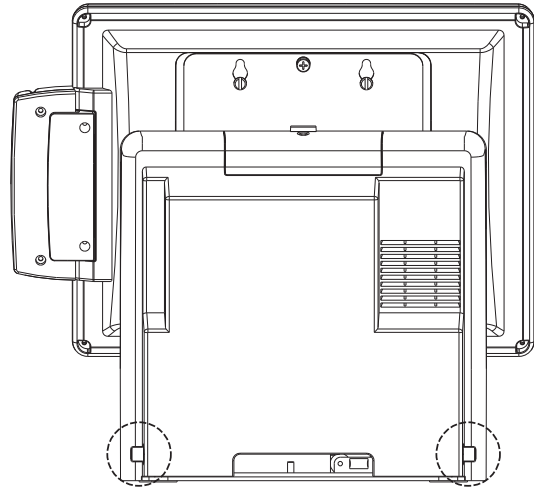
Installing a RAM module

3. Slide the memory module into the memory slot and press down until it fix with the ejector clips.

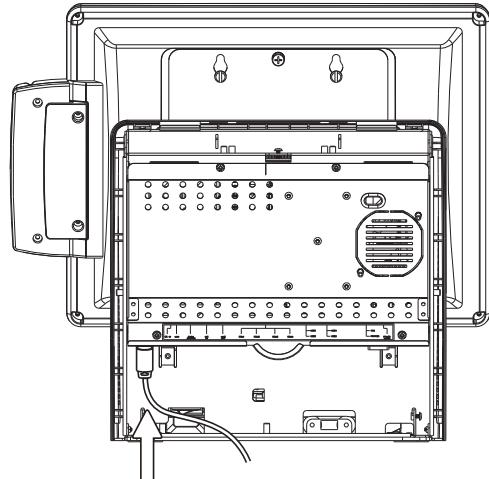


3-3. Power Adapter Replacement

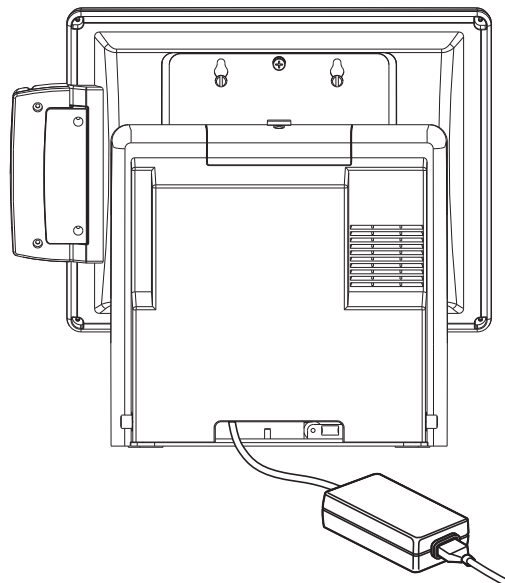
1. Unfasten the thumb screws (x2) to open the rear cover which covered the motherboard and the sheet metal bracket.



2. Connect the power cable to the I/O panel.



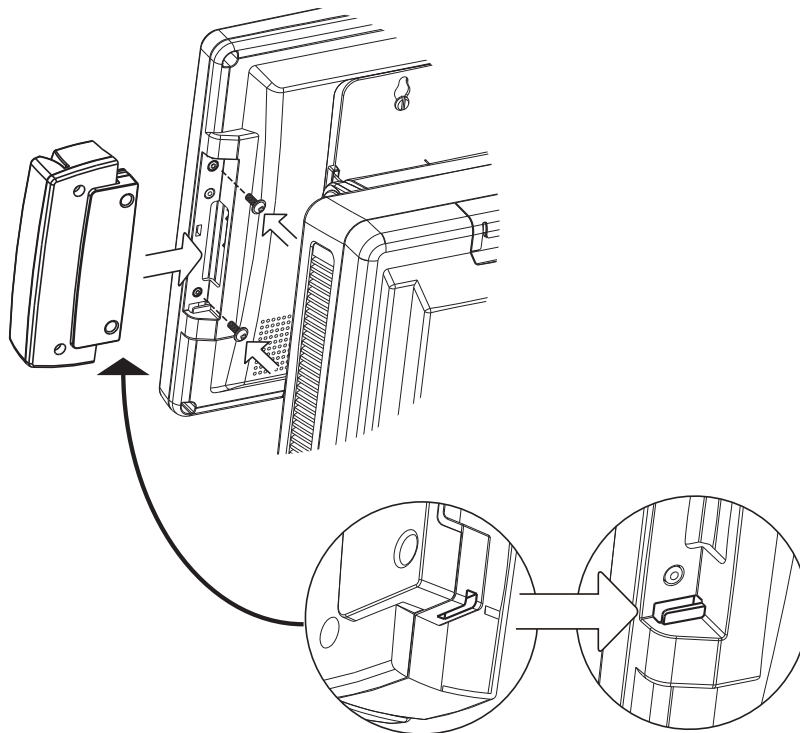
3. Cover the rear cover again and manage the power cable and the adapter from the cable outlet of the rear cover.



4. Peripheral Installation

4-1. MSR Installation

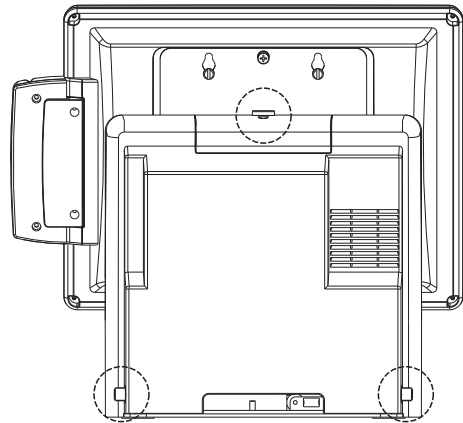
The system provide 5 kinds of MSR for selections: MSR, 2-in-1 MSR+smart IC card reader, 2-in-1 MSR+fingerprint reader, 2-in-1 MSR+iButton reader and the 3-in-1 MSR+smart IC card reader+iButton reader modules.



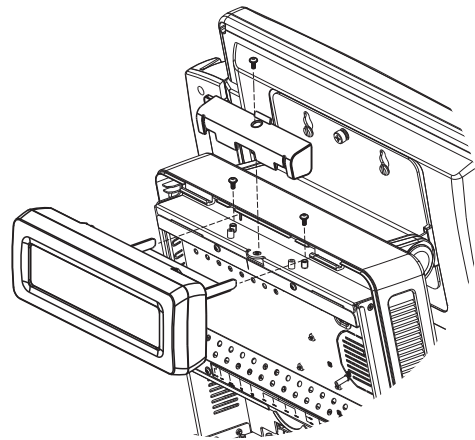
1. Open the MSR cover on the TFT LCD module and install the MSR module into the right position. The installing connectors vary according to different MSR module.

4-2. VFD Installation

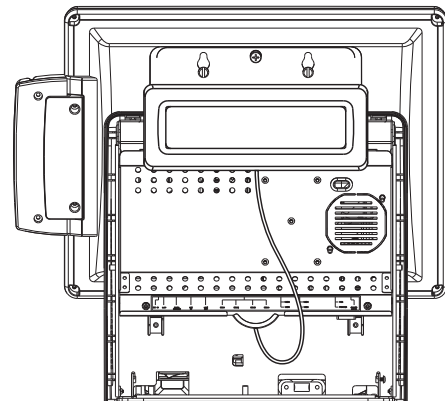
1. Open the rear cover by loosen the thumb screws (x2) on the both sides.
2. Uncover the VFD cover by loosen the screw (x1).



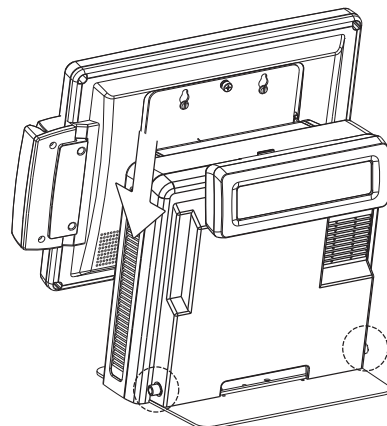
3. Install the VFD module by aligning the metal bracket attached to the rear of the VFD into the right position of the system and fasten the screws (x2) to fix the VFD module with the POS system.
4. Cover the VFD cover provided and fasten the screw (x1).



5. Connect the RJ45-RJ45 cable to VFD module and the I/O panel of the system.

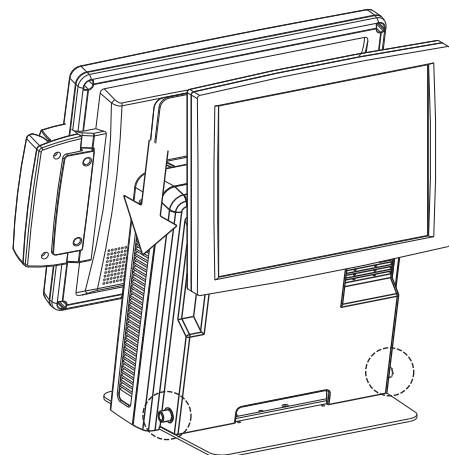
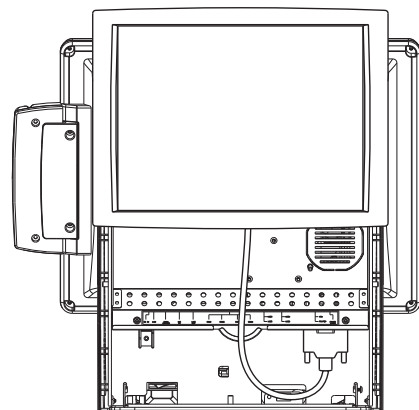
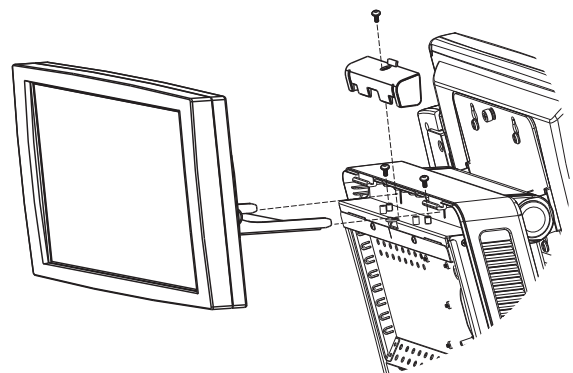
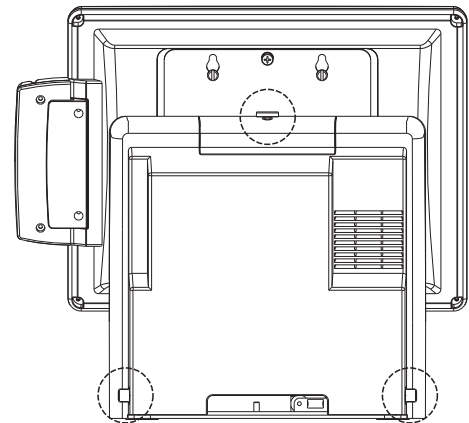


6. Cover the rear cover of the system and fasten the thumb screws (x2).



4-3. Second Display Installation

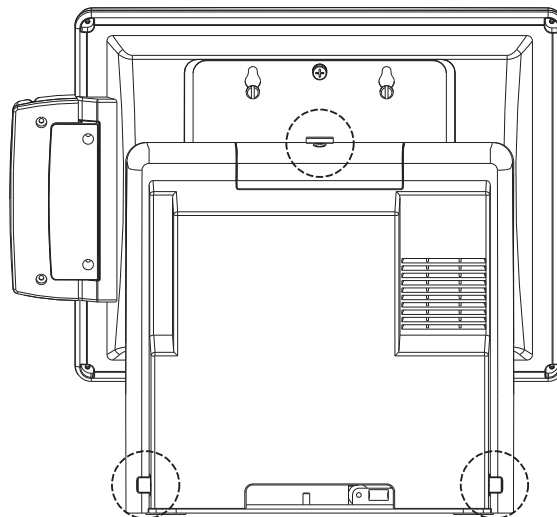
1. Open the rear cover by loosen the thumb screws (x2) on the both sides.
2. Uncover the VFD cover by loosen the screw (x1).
3. Aligning the metal bracket attached to the rear of the 2nd display module into the right position of the system and fasten the screws (x2) to fix the 2nd display module with the POS system.
4. Cover the 2nd display cover provided and fasten the screw (x1).
5. Connect the RJ45-VGA cable to the 2nd display and the I/O panel.
6. Cover the rear cover of the system again and fasten the thumb screws (x2).



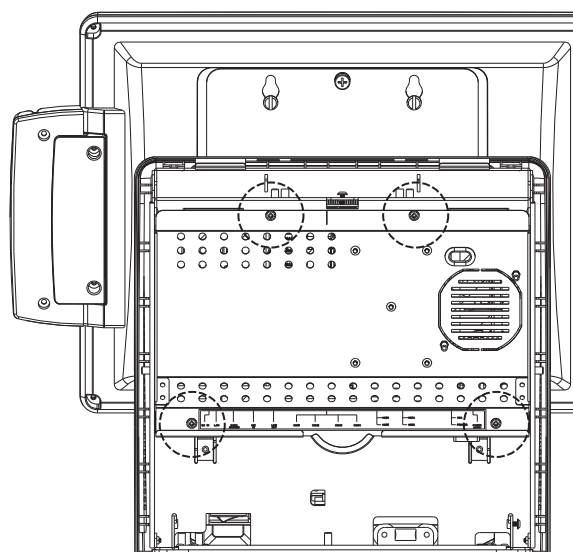
4-4. WLAN Installation

If you will install the WLAN module after manufacturer, please follow the steps below to assemble the WLAN and internal antenna cable.

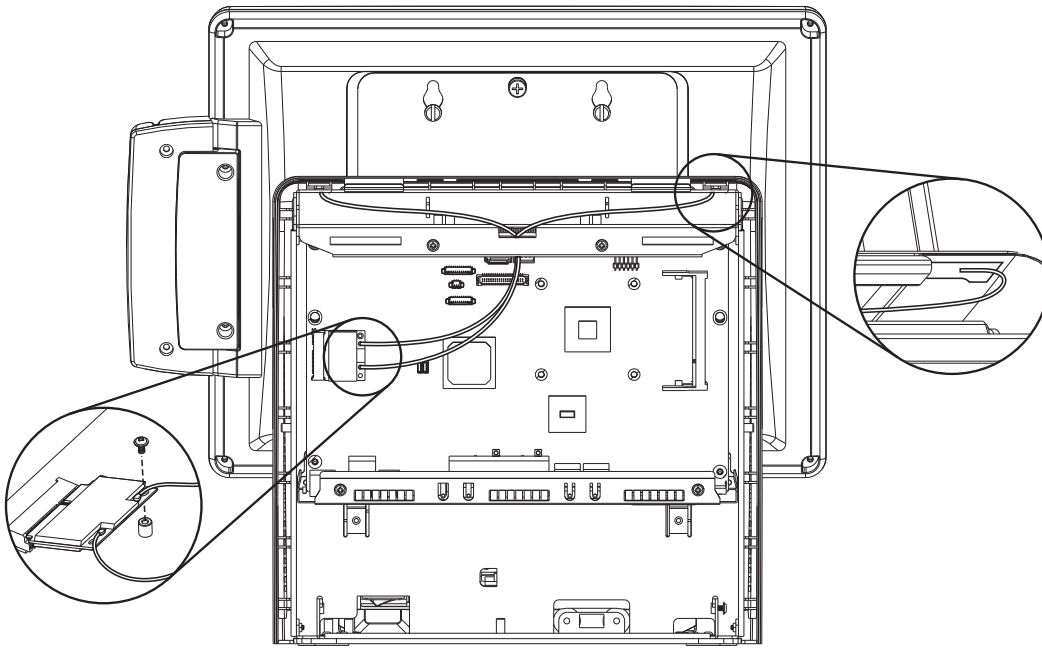
1. Open the rear cover by loosen the thumb screws (x2),



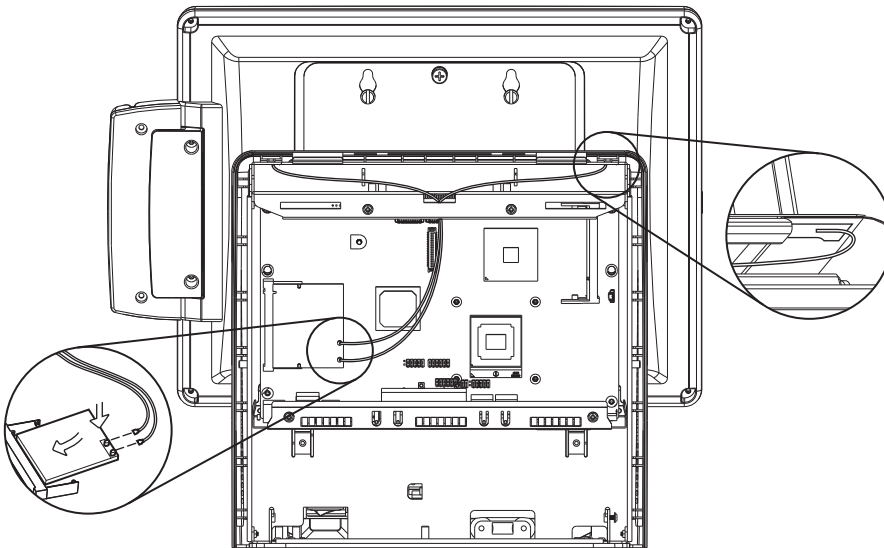
2. Open the sheet metal bracket covered the motherboard by loosen the screws (4).



For B68 / C48 motherboard



For B78 and B98 motherboard



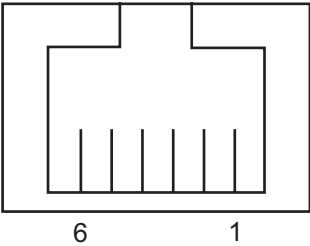
3. **For B68 or C48 motherboard:** Install the mini PCI-E WLAN card by sliding it into the WLAN card slot, pushing down and fix it with the screw provided (x1).
For B78 or B98 motherboard: Install the mini PCI WLAN card by pushing it into the WLAN card slot until it click in place.
4. Connect the antenna cables (x2) with the WLAN card.
5. Attach the internal antennas (x2) to the upper position of the plastic housing.

4-5. Cash Drawer Installation

4-5-1. For B78 motherboard

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.

Cash Drawer Pin Assignment



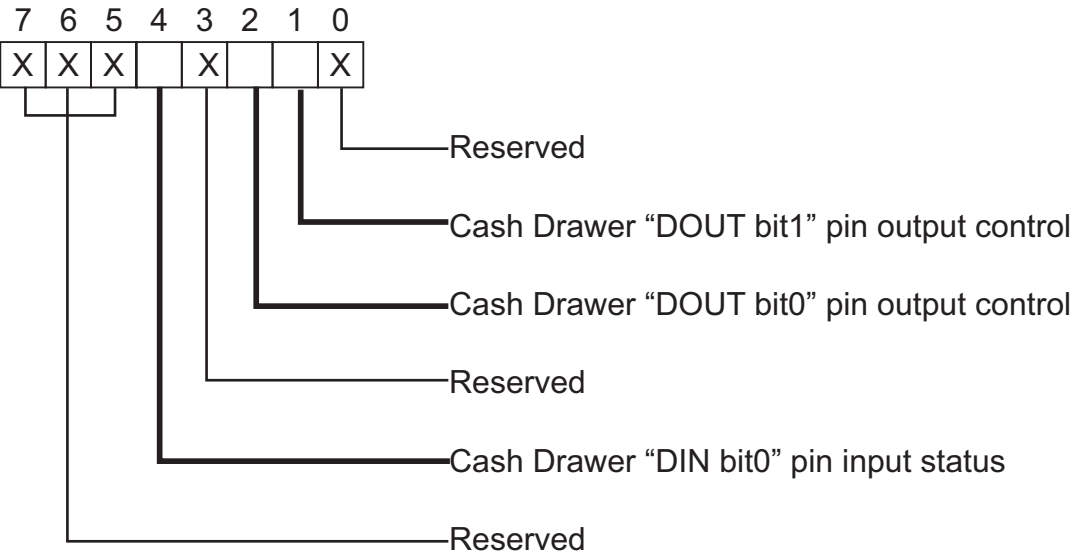
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

Register Location: 4B8h
Attribute: Read / Write
Size: 8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved			Read	Reserved	Write		Reserved



Bit 7: Reserved.
 Bit 6: Reserved.
 Bit 5: Reserved.
 Bit 4: Cash Drawer "DIN bit0" pin input status.
 = 1: the Cash Drawer closed or no Cash Drawer.
 = 0: the Cash Drawer opened.
 Bit 3: Reserved.
 Bit 2: Cash Drawer "DOUT bit0" pin output control.
 = 1: Opening the Cash Drawer
 = 0: Allow closing the Cash Drawer
 Bit 1: Cash Drawer "DOUT bit1" pin output control.
 = 1: Opening the Cash Drawer
 = 0: Allow closing the Cash Drawer
 Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer

Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

Command	Cash Drawer
O 4B8 04	Opening
O 4B8 00	Allow to closing
► Set the I/O address 4B8h bit2 =1 for opening the Cash Drawer by "DOUT bit0" pin control. ► Set the I/O address 4B8h bit2 = 0 to allow closing Cash Drawer.	

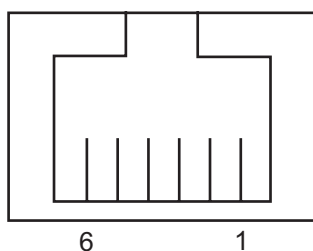
Command	Cash Drawer
I 4B8	Check status
► The I/O address 4B8h bit4 =1 means the Cash Drawer is closed or no Cash Drawer. ► The I/O address 4B8h bit4 =0 means the Cash Drawer is open.	

4-5-2. For B68/B98/C48 motherboard

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.

Below cash drawer installation is applicable for B68 and B98 motherboard.

Cash Drawer Pin Assignment



Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

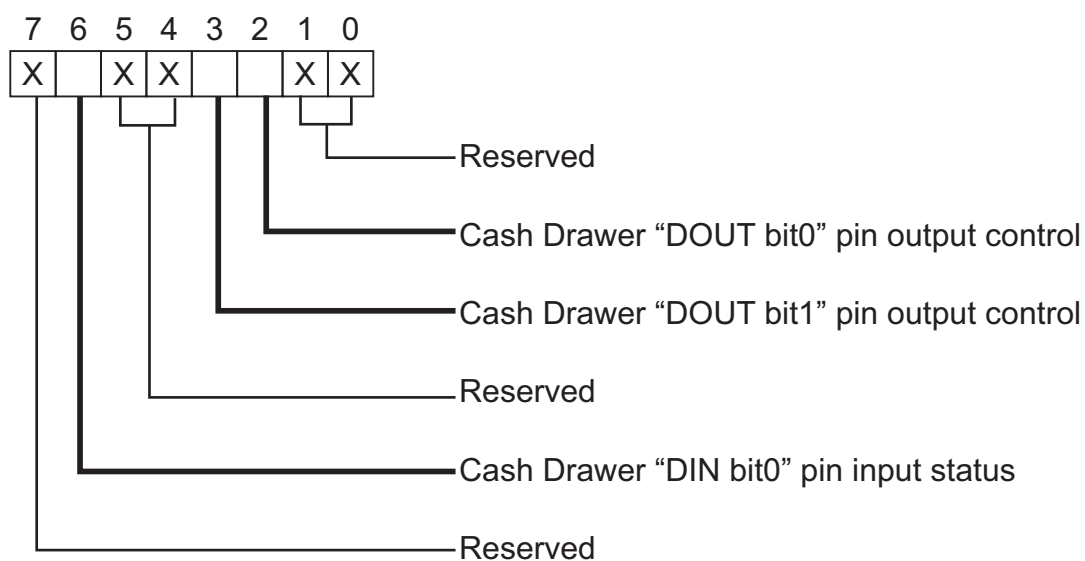
The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

Register Location: 48Ch

Attribute: Read / Write

Size: 8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved	Read	Reserved		Write		Reserved	



Bit 7: Reserved
 Bit 6: Cash Drawer "DIN bit0" pin input status.
 = 1: the Cash Drawer closed or no Cash Drawer
 = 0: the Cash Drawer opened
 Bit 5: Reserved
 Bit 4: Reserved
 Bit 3: Cash Drawer "DOUT bit1" pin output control.
 = 1: Opening the Cash Drawer
 = 0: Allow close the Cash Drawer
 Bit 2: Cash Drawer "DOUT bit0" pin output control.
 = 1: Opening the Cash Drawer
 = 0: Allow close the Cash Drawer
 Bit 1: Reserved
 Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer.

Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

Command	Cash Drawer
O 48C 04	Opening
O 48C 00	Allow to close
► Set the I/O address 48Ch bit2 =1 for opening Cash Drawer by "DOUT bit0" pin control. ► Set the I/O address 48Ch bit2 = 0 for allow close Cash Drawer.	

Command	Cash Drawer
I 48C	Check status
► The I/O address 48Ch bit6 =1 mean the Cash Drawer is opened or not exist. ► The I/O address 48Ch bit6 =0 mean the Cash Drawer is closed.	

5. Specifications

Motherboard	B78	B98	B68	C48
CPU Support	Intel Celeron M ULV 1.0GHz (fanless) Intel Celeron M 1.5GHz / Pentium M 1.8GHz (fan)	Intel Celeron M 1.86/GHz Core duo 2.0GHz Core 2 duo 1.66GHz (socket)	Intel Atom N270 processors 1.6G (fanless)	Intel Pineview D525 dual core 1.8G L2 1M, FSB800Mhz
Chipset	Intel 852GM + ICH4 FSB 400MHz	Intel 945GME + ICH7M FSB 400/533/667MHz	Intel 945GSE + ICH7M FSB 533MHz	CPU with Graphic built-in + ICH 8M
System Memory	1 x DDR SO-DIMM Slot support up to 1GB	2 x DDR2 SO-DIMM Slot support up to 4GB	2 x DDR2 DIMM up to 2GB	2 x DDR3 DIMM up to 4GB, FSB 800Mhz
Graphic Memory	Shared system memory up to 64MB	Shared system memory up to 224MB	Shared system memory up to 224MB	Intel GMA 3150, share system memory up to 256MB
LCD Touch Panel				
LCD Size	15" TFT LCD			
Brightness	250nits			
Maximal Resolution	1024 x 768			
Touch Screen Type	Resistive / IR			
Tilt Angle	10° ~ 90°			
Storage				
HDD	2.5" SATA HDD or 3.5" SATA HDD			
Flash Memory	by optional SSD (without HDD)			
Expansion				
Mini PCI	1	1	NA	NA
Mini-PCI-E Slot	NA	NA	1	1
External I/O Ports				
Front I/O				
USB	2 ports (V2.0)			
Rear I/O				
USB	4 ports (V2.0)			
Serial / COM	4 x RJ 45 COM (B68 /B78/ B98 COM 3 /COM 4 with 5V/12V)			4 x RJ 45 COM (COM1/COM2 standard RS-232 without power, COM3 /COM4 powered COM with power enable /disable by BIOS setting and +5V/+12V by MB setting. COM3 default +5V/ COM4 default +12V)
Parallel	1			
LAN (10 /100 / 1000)	1 x RJ45			
DC Jack	1			
2nd VGA	1			
Cash Drawer Port	1 x RJ 11 (12V /24V)			
Audio Jack	1 x Line-out, 1 x Mic-in			
Audio				
Speaker	2 x 2W speakers (optional)			
Power				
Power Adapter	19V/90W			

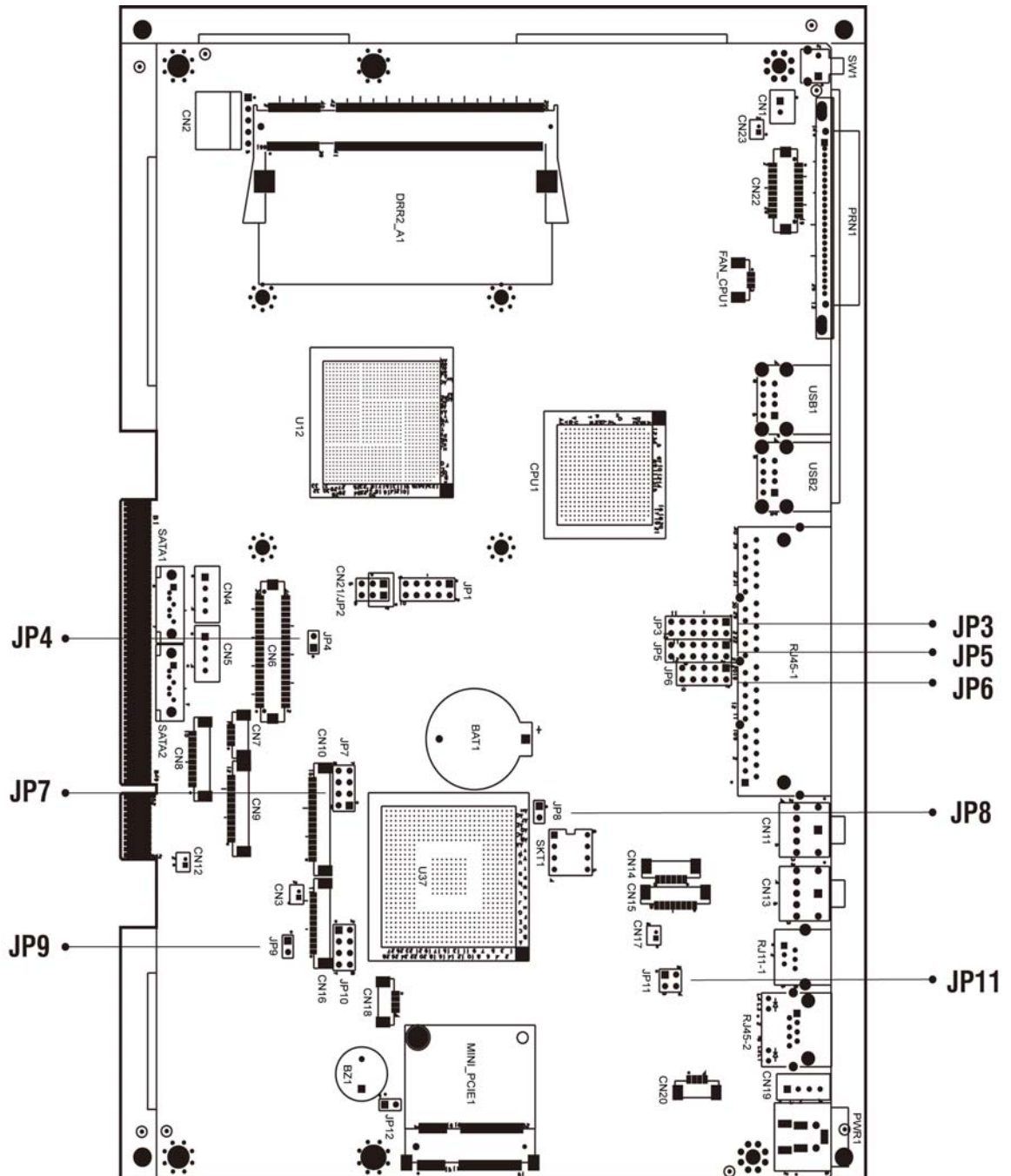
Control / Indicator				
Power Button	1			
Motherboard	B78	B98	B68	C48
Peripheral				
MSR	3 Tracks MSR (PS/2)			
2-in-1 MSR	MSR (PS/2) / fingerprint (USB) MSR (PS/2) / iButton (PS/2)			
3-in-1 MSR	MSR (PS/2) + Smart IC card reader (USB) + iButton (PS/2)			
Second Display	(optional) 8.4" / 10.4" / 12.1" / 15" 2nd display without touch			
Customer Display	Flush mount VFD display 2 x 20 characters (COM)			
Environment				
EMC & Safety	FCC, Class A, CE, LVD			
Operating Temperature	5°C ~ 35°C (41°F ~ 95°F)			
Storage Temperature	-20°C ~ 55°C (-4°F ~ 140°F)			
Operating Humidity	20% ~ 80% RH non condensing			
Storage Humidity	20% ~ 85% RH non condensing			
Dimension (W x D x H)	LCD 90 degree : 366 x 225 x 340.5 mm			
Weight (N.W./G.W.)	9kgs / 11kgs			
Mounting	100mm x100mm VESA Standard holes			
OS Support	Windows XP Professional, Windows Embedded POSReady 2009, Windows XP Embedded, Windows XP Professional for Embedded, Windows 7, Vista, Linux, WinCE (for C48)			

* This specification is subject to change without prior notice.

6. Jumper Setting

6-1. For B68 Motherboard

6-1-1. Motherboard Layout



Version: B68 v1.0

6-1-2. Connectors & Functions

Connector	Purpose
BAT1	CMOS Battery Base (Use CR2023)
CN1	Power On Button
CN3	Power LED
CN4	SATA1 HDD Power Connector
CN5	SATA2 HDD Power Connector
CN6	LCD Interface Connector
CN8	For External Touch Connector
CN9	Inverter Connector
CN10	Card Reader Connector
CN12	LED
CN14	Speaker & MIC Connector
CN15	CD-IN Connector
CN18	USB5
CN20	PS2 KEYBOARD
DDR2_A1	DDR2 SO-DIMM1
DDR2_A2	DDR2 SO-DIMM2
SATA1	SATA Connector
SATA2	SATA Connector
SW1	Power On Button
JP1	CRT Connector
JP3	COM3/COM4 Power Setting
JP4	VGA Power Setting
JP5	COM2 Connector
JP6	COM2 RS232/422/485 Setting
JP7	LCD ID Setting
JP8	RTC Reset
JP9	Power Mode Setting
JP11	Cash Drawer Power Setting
JP12	System Reset

6-1-3. Jumper Setting

COM2 RS232/485/422 Setting

Function	JP6	JP5
▲ RS232	1 3 5 7 9 2 4 6 8 10	1 3 5 7 9 11 2 4 6 8 10 12
RS485	1 3 5 7 9 2 4 6 8 10	1 3 5 7 9 11 2 4 6 8 10 12
RS422	1 3 5 7 9 2 4 6 8 10	1 3 5 7 9 11 2 4 6 8 10 12

COM3 & COM4 Power Setting

Function		JP3
COM3 Pin10	▲ RI	1 3 5 7 9 11 2 4 6 8 10 12
	+5V	1 3 5 7 9 11 2 4 6 8 10 12
	+12V	1 3 5 7 9 11 2 4 6 8 10 12
COM4 Pin10	▲ RI	1 3 5 7 9 11 2 4 6 8 10 12
	+5V	1 3 5 7 9 11 2 4 6 8 10 12
	+12V	1 3 5 7 9 11 2 4 6 8 10 12

▲ = Manufacturer Default Setting

Cash Drawer Power Setting

Function	JP11				
▲ +12V	<table><tr><td>1</td><td>3</td></tr><tr><td>2</td><td>4</td></tr></table>	1	3	2	4
1	3				
2	4				
+19V	<table><tr><td>1</td><td>3</td></tr><tr><td>2</td><td>4</td></tr></table>	1	3	2	4
1	3				
2	4				

Power Mode Setting

Function	JP9
▲ ATX Power	1 2
AT Power	1 2

VGA Power Setting

Function	JP4
▲ No Power	1 2
+12V	1 2

System Reset

Function	JP12
▲ System Normal	1 2
System Reset	1 2

RTC Reset

Function	JP8
▲ CMOS Normal	1 2
CMOS Reset	1 2

▲ = Manufacturer Default Setting

LCD ID Setting

Panel#	Resolution	LVDS		Output Interface	JP7
		Bits	Channel		
1	1366 x 768	24	Single	LVDS Panel	1 3 5 7 2 4 6 8
2	1440 x 900	24	Dual	LVDS Panel	1 3 5 7 2 4 6 8
4	1920 x 1080	24	Dual	LVDS Panel	1 3 5 7 2 4 6 8
5	1024 x 768	24	Single	LVDS Panel	1 3 5 7 2 4 6 8
6	1280 x 1024	24	Dual	LVDS Panel	1 3 5 7 2 4 6 8
7	800 x 600	24	Single	LVDS Panel	1 3 5 7 2 4 6 8
9	1024 x 768	18	Single	LVDS Panel	1 3 5 7 2 4 6 8
11	800 x 600	18	Single	LVDS Panel	1 3 5 7 2 4 6 8
12	800 x 600	18	Single	LVDS Panel	1 3 5 7 2 4 6 8
				CRT	1 3 5 7 2 4 6 8

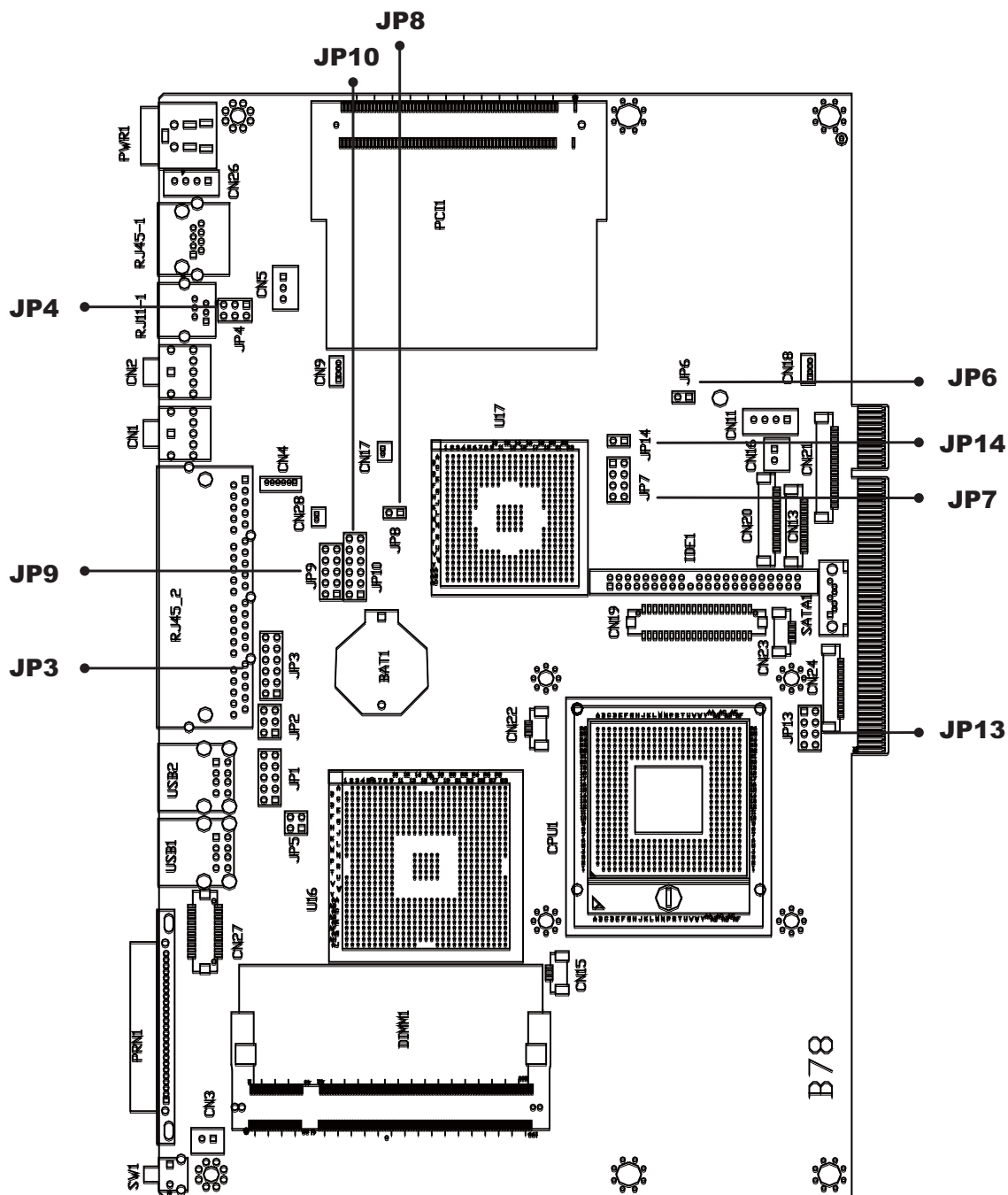
Remark:

Panel ID#12 is specialized for Sharp 12.1" LQ121S1LG41/LQ121S1LG42 panel.

1 Jumper open 1 Jumper short
 2 Jumper open 2 Jumper short
 ▲ = Manufacturer Default Setting

6-2. For B78 Motherboard

6-2-1. Motherboard Layout



Version: B78 v2.2

6-2-2. Connectors & Functions

Connector	Function
BAT1	CMOS Battery Base (Use CR2023)
CN3	Internal Power Switch
CN4	Speaker & MIC Connector
CN9	CD-IN Connector
CN11	Power Connector For 3.5" HDD
CN13	COM5 for Touch
CN15	CPU FAN Connector
CN18	USB2
CN19	LCD Interface Connector
CN20	Inverter Connector
CN21	Card Reader Connector
CN22	System FAN Connector
CN26	Internal Power In Connector
CN27	Internal LPT Connector
IED1	Secondary IDE Connector (Pitch = 2.0mm)
JP3	Power Option for COM3/COM4
JP4	Cash Drawer Power Setting
JP6	Power Mode Setting
JP7	LCD ID Setting
JP8	CMOS Operation Mode
JP9/JP10	COM2 RS232/485/422 Setting
JP13	System Indicator
JP14	USB Path Setting

6-2-3. Jumper Setting

COM2 RS232/485/422 Setting

Function	JP10	JP9
▲RS232	1 357911 2 4681012	1 3 57 9 2 4 6810
RS485	1 3 57911 2 4 681012	135 7 9 2 46 8 10
RS422	13 5 7 9 11 24 6 8 10 12	1357 9 2468 10

COM3 & COM4 Power Setting

Function		JP3
COM3 Pin10	▲RI	1 357911 2 4681012
	+5V	1 3 57911 2 4 681012
	+12V	13 5 7911 24 6 81012
COM4 Pin10	▲RI	135 7 911 246 8 1012
	+5V	1357 9 11 2468 10 12
	+12V	13579 11 246810 12

▲ = Manufacturer Default Setting

Cash Drawer Power Setting

Function	JP4						
▲+12V	<table><tr><td>1</td><td>3</td><td>5</td></tr><tr><td>2</td><td>4</td><td>6</td></tr></table>	1	3	5	2	4	6
1	3	5					
2	4	6					
+19V	<table><tr><td>1</td><td>3</td><td>5</td></tr><tr><td>2</td><td>4</td><td>6</td></tr></table>	1	3	5	2	4	6
1	3	5					
2	4	6					

Power Mode Setting

Function	JP6
▲ATX Power	1 2
AT Power	1 2

CMOS Operation Mode

Function	JP8
▲ CMOS Normal	1 2
CMOS Reset	1 2

USB Path Setting

Function	JP14
▲ To Docking	1 2
To Motherboard	1 2

System Indicator Function

Function	JP13								
▲ Disable	<table><tr><td>1</td><td>3</td><td>5</td><td>7</td></tr><tr><td>2</td><td>4</td><td>6</td><td>8</td></tr></table>	1	3	5	7	2	4	6	8
1	3	5	7						
2	4	6	8						
Enable	<table><tr><td>1</td><td>3</td><td>5</td><td>7</td></tr><tr><td>2</td><td>4</td><td>6</td><td>8</td></tr></table>	1	3	5	7	2	4	6	8
1	3	5	7						
2	4	6	8						

▲ = Manufacturer Default Setting

LCD ID Setting

Panel#	Resolution	LVDS		JP7
		Bits	Channel	
1	1366 x 768	24	Single	1 3 5 7 2 4 6 8
3	1024 x 768	18	Single	1 3 5 7 2 4 6 8
4	1280 x 1024	24	Dual	1 3 5 7 2 4 6 8
6	800 x 600	24	Single	1 3 5 7 2 4 6 8
7	800 x 600	18	Single	1 3 5 7 2 4 6 8
8	800 x 600	18	Single	1 3 5 7 2 4 6 8
9	1024 x 768	24	Single	1 3 5 7 2 4 6 8
10	1440 x 900	24	Dual	1 3 5 7 2 4 6 8
12	1440 x 900	18	Dual	1 3 5 7 2 4 6 8

Remark:

Panel ID#8 is specialized for Sharp 12.1" LQ121S1LG41/
LQ121S1LG42 panel.

1 2

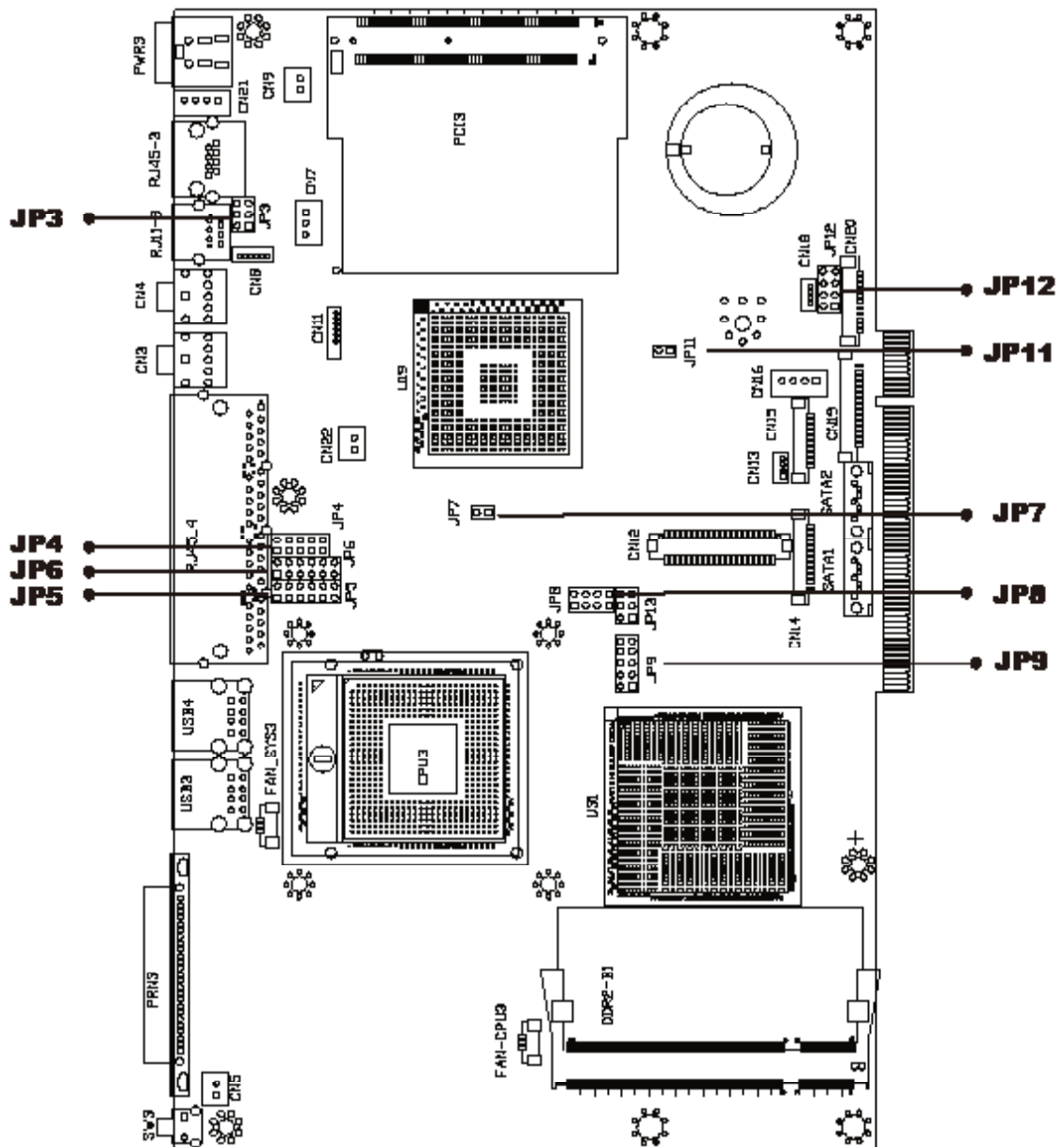
 Jumper open

1 2

 Jumper short

6-3. For B98 Motherboard

6-3-1. Motherboard Layout



Version: B98 v1.0

6-3-2. Connectors & Functions

Connector	Purpose
BAT3	CMOS Battery Base (Use CR2023)
CN5	Internal Power On Switch Connector
CN8	Speaker & MIC Connector
CN11	CD-IN / Line-In Connector
CN12	LCD Interface Connector
CN14	Inverter Connector
CN15	COM5 for Touch
CN16	Power Connector For HDD
CN18	USB5
CN19	Card Reader Connector
CN21	Internal Input Power Connector
DDR2_A1	DDR2 SO-DIMM
DDR2_B1	DDR2 SO-DIMM
FAN_CPU3	CPU FAN Connector
FAN_SYS3	System FAN Connector
PCI3	Mini PCI Socket
JP3	Power Option for Cash Drawer
JP4/JP6	COM2 RS232/485/422 Setting
JP5	COM3/COM4 Power Setting
JP7	CMOS Operation Mode
JP8	LCD ID Setting
JP9	VGA Port
JP11	Power Mode Setting
JP12	System Indicator

6-3-3. Jumper Setting

COM2 RS232/485/422 Setting

Function	JP6	JP4
▲RS232	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10
RS485	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10
RS422	1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10

COM3 & COM4 Power Setting

Function		JP5
COM3 Pin10	▲RI	1 2 3 4 5 6 7 8 9 10 11 12
	+5V	1 2 3 4 5 6 7 8 9 10 11 12
	+12V	1 2 3 4 5 6 7 8 9 10 11 12
COM4 Pin10	▲RI	1 2 3 4 5 6 7 8 9 10 11 12
	+5V	1 2 3 4 5 6 7 8 9 10 11 12
	+12V	1 2 3 4 5 6 7 8 9 10 11 12

▲ = Manufacturer Default Setting

Cash Drawer Power Setting

Function	JP3
▲+12V	1 2 3 4 5 6
+19V	1 2 3 4 5 6

Power Mode Setting

Function	JP11
▲ATX Power	1 2
AT Power	1 2

CMOS Operation Mode

Function	JP7
▲CMOS Normal	1 2
CMOS Reset	1 2

System Indicator

Function	JP12
▲ Disable	1 2 3 4 5 6 7 8
Enable	1 2 3 4 5 6 7 8

▲ = Manufacturer Default Setting

LCD ID Setting

Panel#	Resolution	LVDS		Output Interface	JP8
		Bits	Channel		
1	1366 x 768	24	Single	LVDS Panel	1 3 5 7 2 4 6 8
2	1440 x 900	24	Dual	LVDS Panel	1 3 5 7 2 4 6 8
4	1920 x 1080	24	Dual	LVDS Panel	1 3 5 7 2 4 6 8
5	1024 x 768	24	Single	LVDS Panel	1 3 5 7 2 4 6 8
6	1280 x 1024	24	Dual	LVDS Panel	1 3 5 7 2 4 6 8
7	800 x 600	24	Single	LVDS Panel	1 3 5 7 2 4 6 8
9	1024 x 768	18	Single	LVDS Panel	1 3 5 7 2 4 6 8
11	800 x 600	18	Single	LVDS Panel	1 3 5 7 2 4 6 8
12	800 x 600	18	Single	LVDS Panel	1 3 5 7 2 4 6 8
				CRT	1 3 5 7 2 4 6 8

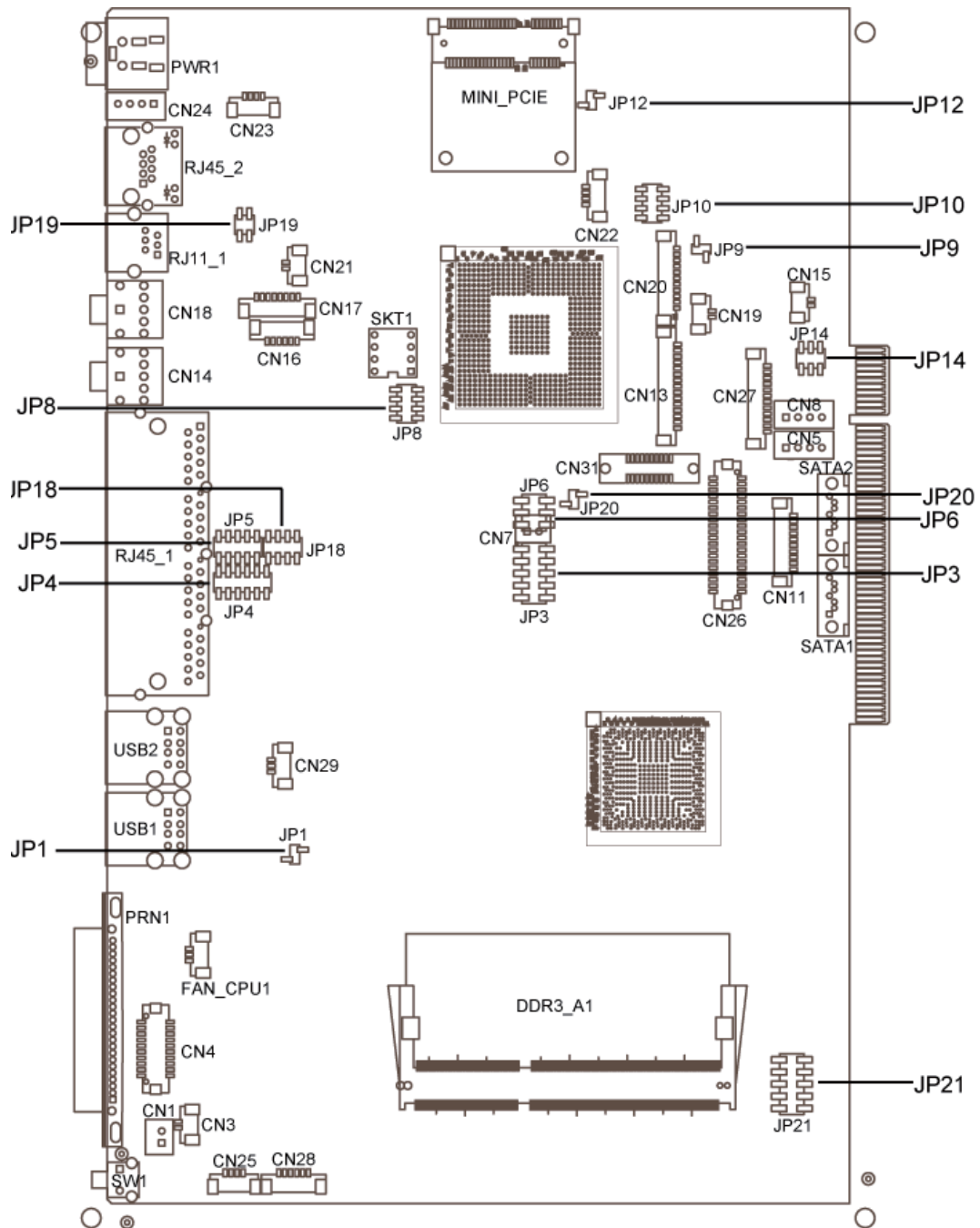
Remark:

Panel ID#12 is specialized for Sharp 12.1" LQ121S1LG41/
LQ121S1LG42 panel.

1
2 Jumper open 1
2 Jumper short

6-4. For C48 Motherboard

6-4-1. Motherboard Layout



Version: C48 v2.1

6-4-2. Connectors & Functions

Connector	Purpose
CN1	Power Button Connector
CN3	Printer Port Reset
CN4	Printer Port
CN5/8	HDD Power
CN11	COM5 For Touch
CN13	Card Reader Connector
CN14	Line out
CN15	HDD LED
CN16	Speaker & MIC
CN17	CD IN
CN18	MIC IN
CN19	Power LED
CN20/JP10	System Indicator
CN21	LAN LED
CN22	USB Port
CN23	PS2 KEYBOARD
CN24	+19V DC IN
CN25	For GM2621 Debug
CN26	LVDS
CN27	Inverter Connector
CN28	Key Pad
CN29	System Fan
DDR3_A1	DDR3 SO-DIMM1
SATA1	SATA Connector
SATA2	SATA Connector
SW1	Power Button
JP1	CMOS Operation Mode
JP3/6	VGA Port
JP4/5	COM2 RS232/485/422 Setting
JP8	LCD ID Setting
JP9	Power Mode Setting
JP12	System Reset
JP14	Inverter Selection
JP18	COM3/4 Power Setting
JP19	Cash Drawer Power Setting

6-4-3. Jumper Setting

COM2 RS232/485/422 Setting

Function	JP5	JP4
▲ RS232	1 3 5 7 9 2 4 6 8 10	1 3 5 7 9 11 2 4 6 8 10 12
RS485	1 3 5 7 9 2 4 6 8 10	1 3 5 7 9 11 2 4 6 8 10 12
RS422	1 3 5 7 9 2 4 6 8 10	1 3 5 7 9 11 2 4 6 8 10 12

Cash Drawer Power Setting

Function	JP19
+19V	1 3 2 4
▲ +12V	1 3 2 4

Power Mode Setting

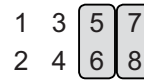
Function	JP9
▲ ATX Power	1 2
AT Power	1 2

System Reset

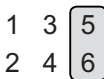
Function	JP12
▲ System Normal	1 2
System Reset	1 2

▲ = Manufacturer Default Setting

System Indicator

Function	JP10
▲ Disable	
Enable	

Inverter Selection

Function	JP14
▲ CCFL	
LED	

CMOS Operation Mode

CMOS Reset

To clear the CMOS,

1. Remove the power cable from the system.
2. Open the system, and set the 'CMOS Operation jumper' from 'CMOS Normal' to 'CMOS Reset'. (refer to the jumper shown below)
3. Connect the power cable to the system, and **power on the system**:
in ATX mode: press the power button and it will fail power on
in AT mode: turn on system power
4. Remove the power cable from the system.
5. Return the "CMOS Operation mode" jumper setting from "CMOS Reset" to "CMOS normal".
6. Connect the power cable and power on the system.

Function	JP1
▲ CMOS Normal	
CMOS Reset	

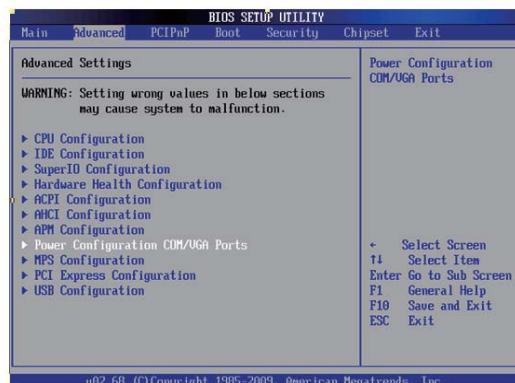
▲ = Manufacturer Default Setting

COM3 & COM4 Power Setting

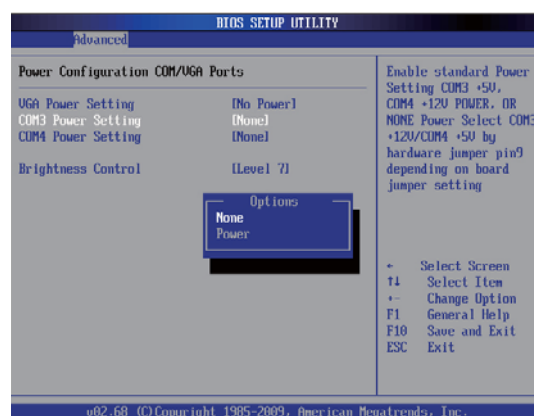
For C48, COM3/COM4 power adjustment must be made by BIOS/Utility and Jumper. Since COM3/COM4 default is "None" meaning no power, power must be on through BIOS prior to physical jumper change.

BIOS/Utility setup

1. Press <DEL> key to enter BIOS SETUP UTILITY when system boot up.
2. Find tab "Advanced".
3. Select "Power Configuration COM/VGA Ports" and press <Enter> to go to sub screen.



4. To switch on the power, select "Power". Please save the change before exiting BIOS so as to go for physical jumper adjustment.



Jumper setup

Function		JP18
COM3	▲ +5V	1 3 5 7 2 4 6 8
	+12V	1 3 5 7 2 4 6 8
COM4	+5V	1 3 5 7 2 4 6 8
	▲ +12V	1 3 5 7 2 4 6 8

▲ = Manufacturer Default Setting

LCD ID Setting

Several configurations are applied to different sizes of panel. Please refer to the followings to complete relevant settings.

12.1"/15" Terminal Physical Jumper Setting

Resolution	LVDS		Output Interface	JP8
	Bits	Channel		
800 x 600	24	Single	1st: LCD Panel 2nd: VGA port	1 3 5 7 2 4 6 8
1024 x 768	24	Single		1 3 5 7 2 4 6 8
1366 x 768	24	Single		1 3 5 7 2 4 6 8
800 x 600	18	Single		1 3 5 7 2 4 6 8
*800 x 600	18	Single		1 3 5 7 2 4 6 8
1024 x 768	18	Single		1 3 5 7 2 4 6 8

***remark:** specialized for Sharp 12.1" LQ121S1LG41/LQ121S1LG42 panel.

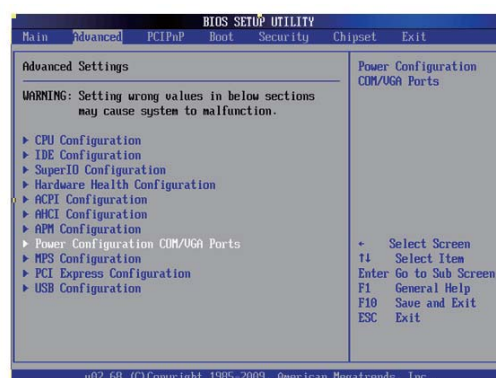
1 2 Jumper open 1 2 Jumper short

2nd VGA Power Setting

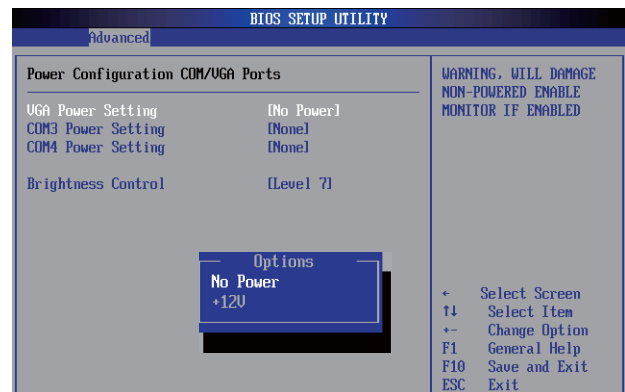
VGA port power must be on through BIOS/Utility for default is "No Power".

BIOS/Utility setup

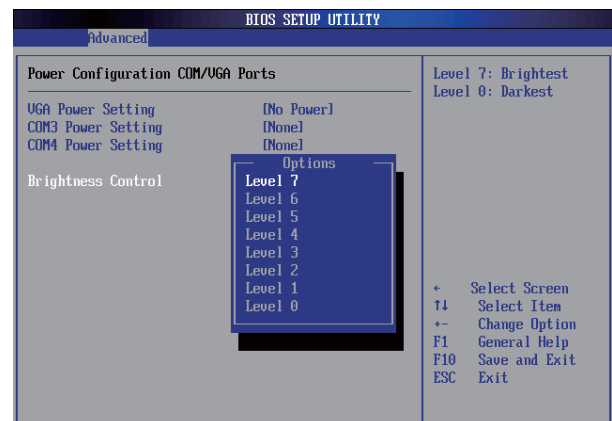
1. Press <DEL> key to enter BIOS SETUP UTILITY when system boot up.
2. Find tab "Advanced".
3. Select "Power Configuration COM/VGA Ports" and press <Enter> to go to sub screen.



4. To switch on the power, select "+12V". Please save the change before exiting BIOS to avoid data lost.



5. To switch brightness level, select brightness control and choose level. Please save the change before exiting BIOS to avoid data lost.



Appendix: Drivers Installation

The shipping package includes a Driver CD in which you can find every individual driver and utility that enables you to install the drivers on the system.

Please insert the Driver CD into the drive and double click on the “index.htm” to select the models. You can refer to the drivers installation guide for each driver in the “Driver/Manual List”.